

**Meeting date:** April 15, 2019  
**Department:** Engineering & Public Works  
**Prepared by:** Paul Zuberbuhler, CET, Manager of Environmental Services  
**Reviewed by:** Greg McClinchey, Chief Administrative Officer  
George Elliott, P.Eng., Director of Engineering & Public Works  
Bill Dakin, Director of Financial Services  
**SUBJECT:** **Water Meter Technology and Replacement Evaluation  
Report No. EPW 19-007**

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## **RECOMMENDATION:**

It is recommended:

1. That Council receive Report EPW 19-007 regarding Water Meter Technology and Replacement Evaluation, and
2. That Council approve the Design Phase for the Water Meter Technology and Replacement Evaluation to be funded from the 2019 Water Capital Budget, and
3. That Council approve the sole sourced award of consulting services to Diameter Services to complete the Design Phase for an cost of \$22,554.80 (incl HST),

## **BACKGROUND**

The Municipality of Strathroy-Caradoc uses individual water meters at each property location to bill for water and wastewater. Water meters are the “cash registers” of the water distribution system. There are currently over 7,000 water meters installed throughout the Municipality of Strathroy-Caradoc.

All of the water meters must be manually read each month by having someone go to each residence. This requires walking to each building and accessing rear yards and navigating various obstacles. The current configuration also requires additional site visits by installation staff and also leads to several maintenance issues.

Of the Municipality’s 7,000 meters almost 50% are due for replacement since they are more than fifteen years old. As water meters age, the accuracy fades and under register flow rates. This leads to lost revenues and increased maintenance costs.

There have been several metering technology advances in the water industry over the past several decades. Many Municipalities have upgraded to radio transmitters installed on meters for many years.

The use of a radio transmitter on a meter enables the data to be collected by driving through a neighborhood or with the addition of repeater towers and receivers, all data can be collected remotely (for instance at the municipal office) without going to the residential area.

With the installation of new meters paired with radio transmitters it allows for better data collection, more information for the customer (leak detection, high flows), reduced maintenance costs, reduced data collection costs and higher levels of customer service.

## **COMMENTS**

The project of upgrading the Municipality's water meters and moving to an Advanced Metering Infrastructure (AMI) or Automatic Meter Reading (AMR) is a large and complex project. Staff have received a proposal from Diameter Services to guide the Municipality through the process of design, procurement and managing a water meter replacement and meter reading technology upgrade.

Diameter Services is an independent consulting company that has no formal or informal association with any water meter or AMI/AMR manufacturers. They have provided similar services to many different clients in North America. The list of Ontario clients include, the City of Toronto, the City of Ottawa, the City of Sudbury, the City of Guelph, County of Brant, County of Oxford, Chatham-Kent and Region of Halton.

Diameter Services is proposing a three phase process for this project.

- 1) Design Phase: Capital cost estimate and business driver review
- 2) Procure Phase: Procurement strategy, specification development and tendering
- 3) Manage Phase: Management of the Implementation of the meter replacement Program.

Proceeding initially with the Design Phase will allow for a detailed review of the current status, evaluation of the business drivers/goals of the project, review AMR/AMI technology, development of project scope, procurement strategies and a recommendations report with capital cost estimates for Council to review.

Following the Design Stage, Council can then decide if and when to proceed with the Procurement Phase.

## **Project Schedule**

The project milestones have the following suggested timeline:

### **Design Phase**

- April 16                      Project Award
- April 16-30                 Data collection
- May 1 - June 28          Review of business drivers and complete the design phase
- July 15                      **Report to Council for authorization to proceed with Procurement**

Should it be decided to continue with the procurement phase, the proposed timeline is:

### **Procurement Phase**

- Aug 1 to Sept 19 Preparation for RFP documentation
- September 20 Release RFP
- October 18 RFP Closes
- November 8 Completion of RFP evaluation
- December 2 **Report to Council for 2020 budget approvals and project award**
- December 20 Finalize Contract with Vendor
- January 2020 Project Start

### **FINANCIAL IMPLICATIONS**

The approved 2019 Water Capital Project Budget is \$50,000. The Design Phase amount of \$23,000 would be funded from this, leaving the remaining \$27,000 for the Procurement Phase. Upon presentation of the business case in July 2019, Council will have the choice of proceeding with the Procurement Phase of the project.

It is noted that the final implementation phase of the project represents approximately \$2,500,000 of work. These costs would be proposed in the 2020 Capital Budget based on firm bid prices from the Procurement Phase. The approval of this current design phase does not commit Council to the large works of implementation. Based on the business case and evaluation works in the design phase, Council will be able to choose if the project should proceed.

### **CONSULTATION**

The preparation of this report and recommendation to award the tender was done in consultation with:

- Chief Administrative Officer
- Director of Engineering and Public Works
- Director of Financial Services

### **ATTACHMENTS**

None.